

How to Use This Guide

This guide is intended to provide users who are new to CDAT a single document where they can get an overall view of CDAT and to provide pointers to more detailed information. There are numerous packages that comprise CDAT. To document all their features here would make this document unreasonably large and daunting to the new user. Instead, the approach adopted here is to give a brief overview of how tasks are accomplished in CDAT and point the reader to other documents or methods of getting additional documentation should they require more details. In that sense this is also a "Documentation of Available Documentation".

Chapter 2 contains instructions on getting started with using CDAT. The Graphical User Interface, VCDAT (which stands for Visual Climate Data Analysis Tools), is introduced in this chapter. It is a powerful tool to browse through data, perform data analysis, find documentation, and to learn the scripting and other capabilities of CDAT. However, CDAT does not require that you use the graphical interface and it is easily executed from the Python command line. A brief introduction to Python is included in this section. The tutorials have example scripts and a set of example datasets. These tutorial scripts are easy to run and provide a range of real life applications that a climate scientist can see in action. The various methods of getting the necessary documentation and help in using CDAT, ranging from printable files to online documentation, FAQs, and discussion groups are listed in this chapter.

Having gone through the tutorial, the next step is to become aware of CDAT's features. Chapter 3 entitled "What's in CDAT?" addresses this. To illustrate the features of CDAT, we have tried to address some of the tasks that a climate scientist may wish to accomplish. Therefore, the organization of tasks is broken up along the lines of File I/O, creating databases and accessing data from them, data extraction, altering variables and metadata, regridding data, spatial and temporal averaging, statistics, and visualization. In addition to these, other sample scripts which describe such tasks as making use of exiting Fortran or C code, and interfacing to specialized packages such as spherepack and EOFs, provide the reader with a flavor for what is already possible to do with CDAT and also how easy it is to leverage off previous efforts. The final chapter in this guide explains how you can contribute to CDAT.